

Health & Safety Policy

Elliott Environmental Surveyors Ltd

Mallan House Bridge End Hexham Northumberland NE46 4DQ

January 2022

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Health & Safety Policy Statement

Our policy is to provide and maintain safe and healthy working conditions, equipment and systems of work for all our staff and to provide such information, training and supervision as they need for this purpose.

We are committed to:

- Maintaining safe and healthy working conditions
- Preventing accidents and cases of work-related ill health
- Providing adequate control of the Health & Safety risks arising from our work activities
- Providing information, instruction and supervision for staff on Health & Safety matters
- Ensuring that all staff are competent to do their tasks, and giving them adequate training
- Consulting with our staff on matters affecting their Health & Safety
- Providing and maintaining safe plant and equipment
- Ensuring the safe handling and use of substances
- Reviewing this policy at regular intervals as the Company changes in nature and size and revising the Health and Safety Policy as necessary.

Responsibilities for these matters are set out on the implementation pages of this Policy.

1.Ellist

Tim Elliott Managing Director

January 2022



Health & Safety Responsibilities

Responsibility

- Overall responsibility for Health & Safety rests with Tim Elliott
- Day to day responsibility for ensuring that this policy is put into practice rests with Tim Elliott.

All Staff have a responsibility to:

- Co-operate with the company and with others on Health & Safety matters
- Respect anything that is provided to safeguard their Health & Safety
- Take reasonable care of the Health & Safety of themselves and others.
- Report all Health & Safety concerns to the appropriate person (as detailed below)
- Report road traffic accidents both internally and for insurance purposes

Tim Elliott is responsible for the following areas:

- o Risk Assessments
 - Receiving reports on the findings of risk assessments
 - Approving action to remove or control risks
 - Ensuring that the required action is implemented
 - · Checking that the implemented actions have removed or reduced the risks
- o Consulting with staff on Health & Safety.
- Reporting accidents, diseases and dangerous occurrences to the enforcing authority.
- Carrying out spot checks of Health & Safety procedures and equipment in the office and on site.

Helen Elliott (Health & Safety Representatives) is responsible for:

- Health & Safety Risk Assessments and Method Statements
 - Ensuring that appropriate risk assessments are carried out, regularly updated and reviewed.
- o Equipment
 - Checking that all current equipment meets the required Health & Safety standards and giving advice before new equipment is purchased.
 - Identifying equipment and plant needing maintenance and ensuring that effective maintenance procedures are set up, implemented and recorded.
 - Checking First Aid equipment regularly and ensuring that it is replenished when necessary.

- Emergency procedures
 - Ensuring that a fire risk assessment is carried out and reviewed regularly.
 - Ensuring that emergency evacuation from the office premises is tested at least once a year.
 - Ensuring that records are kept of the above.
 - Recording any accidents in the Accident Book and investigating any accidents in the office.
- Competency & training
 - Carrying out regular reviews of the Health & Safety and First Aid training needs of all staff.
 - Ensuring that all H & S and First Aid training is provided, either in-house or otherwise.
 - Providing Health & Safety induction training and supervision for new staff.
- Information, instruction and supervision
 - Providing up to date Health & Safety advice to colleagues.
 - Receiving reports of any Health & Safety concerns and ensuring that any necessary actions are taken.
 - Ensuring that Health & Safety is discussed regularly at team meetings and that records of this are kept.

Peter Coulson, Aegis Safety Consultancy

Our Health and Safety Consultants are Aegis Safety Consultancy Ltd. They are consulted as required:

- To provide general health and safety advice and information.
- To provide information on relevant new legislation, regulatory updates and changes.
- To carry out auditing and monitoring services as required.
- To provide an advisory service accessible by the Managing Director and all other staff as required.
- By arrangement carry out accident investigation and liaise with the enforcing authorities.
- Update our health and safety management system and keep us notified of any relevant changes to health and safety legislation.

Helen Elliott is responsible for:

- Making sure that all the requirements of COHSS are currently being met and carrying out regular reviews.
- Identifying any substances currently in use or in the company's possession that need a COSHH assessment.
- Maintaining the Hazardous Substances Register for any such substances in the company's possession.
- Giving advice before any new substances are acquired.
- Ensuring that all colleagues are trained to undertake COSHH assessments when necessary, and that these are being carried out correctly.
- Keeping up to date with latest COSHH requirements and providing advice and help to colleagues when necessary.

Project Managers are responsible for:

- Method Statements for Site Operations
- o Risk Assessments
 - Undertaking risk assessments for individual projects
 - Ensuring that the required actions are implemented
 - Reviewing risk assessments after each site visit or when the work activity changes
- o COSHH
 - Checking that new substances can be used safely before they are purchased.
 - Undertaking COSHH assessments when necessary
 - Ensuring that all actions identified in COSHH assessments are implemented.
 - Reviewing COSHH assessments every twelve months or when the work activity changes.
- o Information, instruction and supervision
 - Ensuring that our staff working at locations under the control of other employers are given relevant Health & Safety information

Helen Elliott is responsible for:

- o Training
 - Keeping training records up to date
 - Arranging Health & Safety training when required.
- o Accidents, first aid and work-related ill health
 - Maintaining PPE stocks
 - Maintaining First Aid equipment
 - Reviewing the need for Health Surveillance periodically.

Malcolm Pickering (Landlord) is responsible for:

- Installation & maintenance of fixed electrical systems.
- Provision of adequate escape routes.
- Testing the fire and smoke alarm systems and emergency lighting.
- Providing, maintaining and checking appropriate fire fighting equipment.



Health & Safety Arrangements

Staff are asked to familiarise themselves with the Company's Health & Safety Policy, Responsibilities and Arrangements.

The Company has a general duty under the Health and Safety at Work Act 1974 to ensure, as far as is reasonably practicable, the health, safety and welfare of everyone.

It is essential that staff co-operate fully in any procedure designed to minimise risk. They are also required to take reasonable care of themselves and others who could be affected by their actions and must ask for further information and guidance if they are unsure about the safety of any work they are required to do. Staff have a legal duty to report any potential hazards immediately and to ensure that the area has been made safe.

1. First Aid

The Company will ensure that there are a sufficient number of people with First Aid training in the Company and that their identity and normal location is known by all.

Basic First Aid equipment which conforms to HSE guidelines is provided in the office and for use in vehicles. Staff should ensure that they know where the office First Aid Kit is located and carry a First Aid Kit in their vehicles at all times when they are travelling on company business. Please let the Office Manager know if any of the First Aid Kits need to be replenished.

2. Accident Reporting

An Accident Book (HSE BI 150) is kept in the office and it is important that all accidents, injuries and incidents, no matter how slight, are reported and recorded on the appropriate form within it. Completed accident forms must be removed from the Accident Book and stored securely to ensure confidentiality.

Reporting of Injuries, Diseases and Dangerous Occurrences

The Managing Director must be told immediately of any accidents requiring hospital treatment and any dangerous near misses, as it may be necessary to report them under the Reporting of Illnesses, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995.

All RIDDOR reporting will be undertaken by the Managing Director.

The most common cause of RIDDOR reports within this industry sector is as a result of any accident at work which has resulted in the member of staff taking more than 7 days off as a direct result of that accident. When calculating this period, do not count the day of the accident. It must include any days the injured person would not normally have been present at work, such as weekends, rest days or holidays.

Under RIDDOR, you do not need to report over-three day-injuries, however a record must

still be kept of these injuries – these records will be kept in the accident book.

RIDDOR Reporting Procedure

If the accident is identified as RIDDOR reportable the enforcing authorities must be contacted via the RIDDOR website. If the accident is fatal or results in major injuries then this must be reported by phone in the first instance (a list of reportable incidents can be found at RIDDOR reportable incidents). The only exception is when an employee is absent from work for more than **seven** consecutive days. In all instances, a report form (F2508) must be submitted via the RIDDOR website. This form must be submitted within **fifteen** days of the known condition.

Reporting under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) may alternatively be carried out by contacting the Incident Contact Centre. The Centre has been established as a joint venture between the Health & Safety Executive (HSE) and the local authorities as a single contact point to simplify the reporting of incidents. The Incident Contact Centre will accept reports from Scotland, England, Wales and the Isle of Wight.

The incident Contact Centre may be contacted as follows:

Internet: http://www.hse.gov.uk/riddor/

Email: riddor@natbrit.com

• Fax: 0845 300 99 24

If an employee of a different organisation, e.g. contractor carrying out work on premises, or a member of the public sustains a personal injury whilst on the host employer's premises, and the injury is classified as being reportable, a RIDDOR report must be completed.

The list of reportable items under the Regulations (RIDDOR) are provided on the HSE website:- http://www.hse.gov.uk/riddor/index.htm

Accident Investigation

In the event of an accident/incident being recorded in the Accident Book, the Managing Director will carry out an accident investigation by completing the Accident/Incident Investigation Report form. Copies of completed reports will be kept with the accident report form.

3. Emergency Services

It is the intention of Elliott Environmental Surveyors to ensure that any risks arising from work activities are eliminated or reduced to a minimum. However, the company acknowledges that despite these measures it cannot be assumed that a major incident will never occur. Although such an incident is highly unlikely if all risks are adequately controlled, the consequences could be catastrophic and so the company will plan certain emergency procedures to ensure injury and damage limitation in the event of such an incident. The Company will also endeavour to give information and training as often as is necessary to all employees (and other persons, such as contractors and visitors) to enable a better understanding of these matters.

In order to be prepared for any emergency event, the company will plan for reasonably foreseeable incidents and prepare a written plan outlining procedures to be followed in such an event. These plans will be discussed with the emergency services before being finalised.

The company will, in consultation with workers and their representatives:

- carry out a risk assessment to identify foreseeable major incidents for which emergency procedures would be required.
- establish procedures to be followed by employees in the event of an emergency situation.

- appoint persons to be responsible for specific procedures in the event of an emergency situation (plus deputies for those listed below to cover holiday or sick leave),
- provide a written version of the procedures to all personnel,
- ensure that the plans cover night and shift working, weekend working and closures for holidays.
- ensure there is an up to date call-out list for key personnel and that this is readily accessible.
- clearly label all important items such as shut-off valves, electrical isolators and fire points or equipment.
- at regular intervals stage evacuation drills, test and check emergency equipment and inspect the means of escape.
- keep all access routes for emergency services and all escape routes clear at all times.
- assist the emergency services by clearly marking the premises and by drawing up a simple plan of the premises (e.g. showing the location of hazardous substances).
- reassess the emergency plan at regular intervals and following any major change in process plant and personnel, and update or alter it as necessary.
- provide training in emergency procedures for all employees, plus specialist training for those with special responsibilities.

On the Client's site

When our staff are sent to a Client's work site, we will ensure that they receive a full H&S induction which includes the emergency procedures in operation on that site. These include emergency evacuation, first aid provision and the arrangements to summon the emergency services to transport injured or ill workers from the work site to the nearest health care facility. If our staff are working in a remote area of the Client's site they will be provided with mobile phones to summon assistance from the Client or the Emergency Services directly. In the event that there is poor mobile phone reception a short wave radio system can be used to maintain communication with the site office. In Lone Working situations all staff working on sites are expected to call the office (or text a nominated person) on reaching and on leaving site and every three hours in between (see Lone Working procedures).

4. Risk Assessments

A Health & Safety Risk Assessment will be carried out for any work which could pose a threat to the health & safety of staff and especially for site work. This will identify the risk involved and the action necessary to avoid or reduce the risk. It is essential that staff should implement the recommendations made in these risk assessments. Risk Assessments must contain information on the nearest emergency facilities and appropriate contact details and must be reviewed on arrival at the site.

Types of Risk Assessment

A method to implement the various assessments as required by the legal provisions outlined in various regulations has been devised for:

- general risks
- personal protective equipment
- manual handling
- display screen equipment
- hazardous substances (COSHH)
- new and expectant mothers
- welfare arrangements

Environmental Surveying Procedures and Methods

The company has issued environmental surveying procedures covering the principal areas of work carried out by the consultancy. Specific Method Statements are generated as part of the Health and Safety Risk Assessment and Method Statement Process for specific projects or activities of higher risk and guidance on this can be found at Appendix IV.

5. Staff at Special Risk

The Company recognises from time to time some individuals may be at increased risk of injury or ill-health resulting from work activities. It is important that staff should advise the Managing Director if they become aware of any change in their personal circumstances which could result in their being at increased risk. This could include medical conditions, permanent or temporary disability, taking medication and pregnancy.

Any person whose levels of alertness are reduced owing to illness or fatigue will not be allowed to work if this might jeopardise their own or anyone else's health and safety.

6. Personal Protective Equipment

PPE will be issued to cover risks that staff may encounter in the course of their work and a written record will be kept of this.

EES will take all reasonable steps to ensure that PPE is properly used and will give proper and adequate information, training and supervision.

All staff have a responsibility to:

- Use PPE in accordance with the advice, instructions and training provided.
- Inspect PPE before usage
- Report any loss or obvious defect with that PPE.
- Make full and proper use of the PPE provided to them.
- Take all reasonable steps to ensure it is returned to the accommodation provided for it after use (where applicable).
- Report any difficulties being experienced with PPE provided.

If staff need any additional or replacement equipment they should let the Managing Director or Office Manager know as soon as possible.

If a member of staff leaves the Company they should return all PPE in their possession.

7. Lone Working

The Company recognises that there may be an increased risk to the health & safety of staff whilst working alone. This may occur during normal working hours at an isolated location within the normal workplace; at a client's premises or site; or when working outside normal business hours.

Risk assessments must cover all work undertaken alone where the risk may be increased by the work activity itself, or by the lack of on-hand support should something go wrong. The following factors must be considered:

- · The risk of verbal threats or violence
- The use of plant and equipment unsuitable for use by one person

- Working at height
- Exposure to chemicals unsuitable for use by one person
- · The medical fitness of the member of staff
- Difficult access and egress to and from particular locations
- · Limited or no mobile phone coverage.

Staff are asked to ensure that when working out of the office they have a working mobile phone with them at all times which they can use to call the office or the emergency services in the event that they fall ill or have other difficulties. Personal first aid equipment is provided by the Company and it is the responsibility of each individual to ensure that it is available and adequately stocked.

All staff working on sites are expected to call the office (or text a nominated person) on reaching and on leaving site and every three hours in between.

8. Welfare

The availability of toilet and washing facilities must be established before work on any site begins as part of the pre-working Health & Safety Risk Assessment process. Information on the existence of appropriate facilities on or near the site should be sought from the client and/or site manager and their location clearly identified in advance.

Where clean water is not available on site staff should take drinking water and a supply of anti-bacterial wipes and solutions with them.

9. Manual Handling

Using incorrect methods for lifting and moving loads may result in back injury either immediately or after a period of time. The following simple steps should be taken to avoid this.

Staff should:

- only manually handle loads that are within their capability and for which they are trained
- get help when handling large or awkward loads
- make use of any mechanical aids to eliminate manual handling if at all possible
- report any injuries or physical conditions that may prevent the manual handling of loads
- wear gloves when necessary and take care to avoid sharp points or edges
- use the correct lifting technique as illustrated in the manual handling training

To lift safely:

This sequence is for simple straightforward manual lifting. If you have any doubts DO NOT attempt to lift and seek advice or assistance:

- stop and think plan the lift. Do you need help? Is the area free from obstruction? Is there mechanical handling provided for the operation, if so use it.
- place feet apart leading leg forward
- get a firm grip keep your arms inside the boundary formed by the legs
- do not jerk bend the knees keeping the back straight, straighten the knees and move off
- move the feet do not twist the body
- keep close to the load
- put down and adjust if necessary.
- This lifting procedure should be followed in reverse when setting the load down.

Risk assessment

When a manual handling task is identified as being beyond the safe working guidelines established in HSE guidance, or represents a risk of injury, a manual handling risk assessment will be completed.

10. Construction (Design and Management) Regulations

The CDM Regulations identify the following duty holders who have responsibilities under the new regulations:

- Client both commercial and domestic
- Principal Contractor appointed when there are 2 or more contractors on site
- Principal Designer appointed by Client
- Designer
- Contractor either working for the Principal Contractor or as a sole contractor.
- Workers

Principal Contractor

In the case of Elliott Environmental Surveyors being appointed the Principal Contractor the company will have duties to plan, manage, monitor and co-ordinate health and safety in the construction phase of a project. This includes:

- Liaising with the client and Principal Designer
- Preparing the construction phase plan using the pre-construction information provided by the Principal Designer
- Organising co-operation between contractors and co-ordinating their work.

We will ensure that:

- Suitable site inductions are provided
- Reasonable steps are taken to prevent unauthorised access
- Workers are consulted and engaged in securing their health and safety
- Welfare facilities are provided.

Contractor

In the case of Elliott Environmental Surveyors acting as a contractor to the Principal Contractor for a project falling under CDM regulations, the company will have duties to plan, manage and monitor construction work under our control so that it is carried out without risks to health and safety. We will co-ordinate our activities with others in the project team – in particular, comply with directions given to us by the principal designer or principal contractor.

For single-contractor projects, we will prepare a construction phase plan for each project we undertake.

Principal Designer

In the case of Elliott Environmental Surveyors acting as a Principal Designer for a project falling under the CDM regulations, the company will have duties to plan, manage, monitor and coordinate health and safety in the pre-construction phase of a project. This includes:

- Identifying, eliminating or controlling foreseeable risks
- Ensuring designers carry out their duties.

We will prepare and provide relevant information to other duty holders and provide relevant information to the Principal Contractor (pre-construction information) to help them plan, manage, monitor and co-ordinate health and safety in the construction phase. This information

Designer

In the case of Elliott Environmental Surveyors acting as a Designer for a project falling under the CDM regulations the company will when preparing or modifying designs, eliminate, reduce or control foreseeable risks that may arise during:

- Construction, and,
- The maintenance and use of a building once it is built.

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We will provide information to other members of the project team to help them fulfil their duties.

Workers

All members of staff who are working on a construction project must:

- Be consulted about matters which affect their health, safety and welfare
- Take care of their own health and safety and that of others who may be affected by their actions
- Report anything they see which is likely to endanger either their own or others' health and safety
- Co-operate with their employer, fellow workers, contractors and other duty holders.

Notification

A project is notifiable if the construction work on a construction site is scheduled to:

- Last longer than 30 working days and have more than 20 workers working simultaneously at any point in the project; or
- Exceed 500 person days.

Where a project is notifiable, the client must give notice in writing to the Executive as soon as is practicable before the construction phase begins.

The F10 notice must be clearly displayed in the construction site office in a comprehensible form where it can be read by any worker engaged in the construction work.

11. Driving at Work

Vehicle Selection

Elliott Environmental Surveyors will provide vehicles which are suitable for their purpose and include the following optional safety equipment – ABS, head restraints, airbags and parking sensors.

Maintenance of Company Vehicles

Helen Elliott will be responsible for ensuring that vehicles are serviced and repaired as recommended by the vehicle manufacturer. Drivers will inform her if vehicle instrumentation indicates servicing requirements, warnings or any other maintenance requirement.

Vehicle Inspections

All company vehicles will be subject to periodic (normally a weekly) inspection. Forms for this purpose can be obtained from Helen Elliott. Completed forms will be returned to Helen Elliott after each inspection. Staff will ensure that attention is drawn to any vehicle defects and remedial action taken as required to maintain vehicle safety.

The vehicle inspection checklist also specifies the safety equipment which must be available on the vehicle at all times.

Safe Driving and Journey Planning

Drivers should adhere to safe driving guidance at all times and wherever possible plan a journey in advance to ensure they do not drive for any excessive period and have included provisions for regular rest breaks and their personal safety. The lone working provisions identified in the H&S Policy must also be observed.

Driving on Company Business

If driving on Company business you:

- Are responsible for your actions whilst driving and operating the vehicle
- Are responsible for the roadworthiness of the vehicle includes basic checks including tyres, lights, fuel etc.
- Must observe the law at all times i.e. wearing seatbelts
- Must abide by speed limits
- Must report any accidents
- Are responsible for any parking tickets, speeding offences etc.
- Are responsible for the safety of your passengers
- Should drive responsibly at all times
- Must not smoke in company vehicles
- · Must ensure that all loads are secured
- Must not use hand held phones to make phone calls, send texts or access any sort of data
- Must report any accidents, incidents or vehicular damage caused whilst driving the vehicle
- Must provide the original licence counterpart to Helen Elliott for an annual inspection. A record of any endorsement codes and penalty points will be made.

Private Vehicles

It is the individual's responsibility to ensure that any private vehicle used for driving at work has a current MOT certificate (if over 3 years old), has Road Tax and has business insurance for their use. Immediately prior to using a private vehicle the driver must ensure it is in a safe roadworthy condition and serviced according to recommendations.

A copy of a valid insurance certificate, showing cover for business use, must be provided to Helen Elliott before a private vehicle is used for business use.

12. Hazardous Substances

Staff may occasionally come into contact with hazardous substances during the course of their employment. To comply with COSHH regulations a Hazardous Substances Register is kept containing hazard data sheets (MSDS) for any such substances in the Company's possession. These data sheets provide clear health and safety information, including first aid, fire precautions, emergency action, correct storage and safe handling.

Staff are asked to ensure that they have read and understood any data sheets relating to substances they encounter during in the course of their work and to observe any safety precautions recommended.

Staff are responsible for notifying the Company of any additional substances brought onto the premises or used in the course of work, which have not otherwise been identified and which may constitute a hazard. A COSHH assessment must be carried out for any such substances

13. Asbestos

Staff may come in contact with asbestos in the course of their work. Asbestos awareness training will be provided for any person likely to be in this situation. Guidance notes on asbestos are also provided in Appendix II of this document. All staff should make themselves fully aware of this information. The Environmental Surveying procedures and Asbestos Surveying procedures provide more specific guidance.

14. Fire Risk

Appropriate fire fighting equipment is readily available and kept in good working order. Staff should make themselves aware of the position of fire exits and fire extinguishers. Fire drills will be held twice a year.

On discovering a fire:

- Activate the fire alarm system at the nearest call point and alert all employees in the immediate area.
- Call the fire brigade if required. Dial 999 for the emergency services. When the exchange operator answers, ask for the fire service and provide your telephone number
- When connected to the Fire Service state slowly and distinctly:
 "This is Elliott Environmental Surveyors Ltd" and provide the address. State "We have a." Do not replace the receiver until this information has been correctly fire acknowledged.
- If the fire is small and if you have been fully trained in the usage of extinguishers, try to extinguish, but do not take any risks.

On hearing the alarm:

- When you hear the sound of the fire alarm, immediately leave the building by the first available exit and report to the assembly point at the far side of the estate road adjacent to the car park. Do not stop to collect belongings etc.
- A roll call will be taken to establish that all members of staff and visitors have evacuated the building. The most senior member of staff present will take the roll call.
- Do not return until advised it is safe to re-enter the building.
- Fire procedures are displayed at the exit to the building.

15. Electricity

All electrical equipment must be connected to the power supply using the correct plugs and sockets with correctly rated fuses.

Electrical equipment is tested annually by an external contractor. Damaged or faulty equipment must not be used.

To reduce the risk of electrocution, staff must not interfere with any electrical equipment or attempt to repair it without reporting the fault and being given permission to proceed.

Electrical installations, inclusive of all electrical wiring, fittings and switches must be inspected upon completion of initial installation, and subsequently at recommended periods (every five years). Any wiring circuit, or part of it, is deemed to be an installation for inspection purposes.

Responsibility for the maintenance and inspection of the fixed electrical installations at Mallan House lies with the landlord, Malcolm Pickering. Any faults with the fixed electrical installation must be reported immediately to the landlord.

16. Slips, Trips and Falls

In the office situation, the practice of good housekeeping (which includes cleanliness and tidiness) is a big factor in the prevention of accidents. The following will reduce the risk of accidents occurring:

- Equipment and materials should be returned to their correct place after use. Whenever possible all aisles and work areas should be kept clear.
- Water, oil or chemicals spilt on the floor should be cleaned up immediately to prevent slips.
- Waste paper and rubbish must not be dropped on the floor but put in the waste bins provided.

In the site (ie non-office) situation, the process of risk assessment should be used to avoid or minimise hazards, and control risks by the use of appropriate PPE, access equipment and footware and other good site practices, as well as personal attentiveness and adequate breaks to reduce fatigue.

17. Computer Use

When staff use computers for a large proportion of their working day they are encouraged to have regular and frequent short breaks from their work station to avoid eye strain and relax their arms and wrists.

Most tasks consist of a mix of screen-based and non screen-based work and natural breaks or pauses occur as a consequence of the work being done. Staff should ensure that they take regular screen breaks to prevent fatigue and vary visual and mental demands. Where a job unavoidably contains periods of intensive screen and keyboard work these should be broken up by deliberate breaks or pauses which allow users to vary their position, blink, stretch and focus eyes on distant objects.

Generally, breaks should be taken before the onset of fatigue, not in order to recuperate, and short frequent breaks are more satisfactory than occasional, longer breaks. A five minute break after an hour of continuous screen and/or keyboard work is likely to be better than a fifteen minute break every two hours. If possible, breaks should be taken away from the screen. Informal breaks (e.g. on other tasks) appear to be more effective in relieving visual fatigue than formal rest breaks.

Staff should ensure that they make full use of the workstation equipment provided, adjusting it to get the best from it. Any problems which can't be resolved should be discussed with the Office Manager as it may be possible to provide additional equipment to reduce any discomfort.

The HSE has issued guidance suggesting ways of minimising any discomfort caused by using a computer. A copy of this guidance can be found below. Staff are advised to read this and follow the advice given.

The Company will provide the following for all 'Display Screen Users':

- Workstation assessments which will identify any requirements in line with the standards specified within the regulations.
- Free eye tests at an Optician or Vision Screening as required.
- Financial assistance towards the purchase of specialist corrective appliances (for example, prescribed for the distance at which the screen is viewed) where normal corrective appliances cannot be used.

18. Health & Safety Training

It is company policy to ensure that all personnel are effectively trained in aspects of Health & Safety, with particular reference to the Health & Safety at Work Act 1974.

A 'training needs analysis' will be carried out regularly to establish Health and Safety training requirements throughout the company and training will be carried out by suitably qualified or experienced people. Health & Safety Induction training will take place when a new employee joins the company.

As new legislation is introduced, so the training will be updated to ensure that at no time are the personnel exposed to any dangers from hazardous substances, or machinery, which they are liable to encounter within the workplace, without receiving effective training in the operation of such items.

Records

A record will be kept of all Health & Safety training provided. This will include dates of attendance and staff signatures.

19. Visitors

A visitor is any person visiting a company office or site who is not directly employed by the Company.

Visitors are not allowed within the company premises or on a site unless a responsible company employee accompanies them, or they have been suitably inducted. The responsibility for health and safety matters for a visitor is that of the employee designated to look after them during their visit.

In the case of a fire or other emergency, the designated employee must know of the whereabouts of their visitors.

20. Work at Height

Legislation

The Work at Height Regulations 2005 requires an assessment to be undertaken before starting any work at height. If the assessment confirms that there is no alternative to working at height, then suitable work equipment should be selected, taking into account the nature of the work. You do this by using the following hierarchy of controls:

- Avoid working at height if possible
- Use an existing safe place of work
- Provide work equipment to prevent falls
- Mitigate distance and consequences of a fall
- Instruction and training and/or other means.

Training

Training in the use of all work at height activities will be provided by Elliott Environmental Surveyors depending upon the nature of the work involved. The training will be appropriate and sufficient to establish that any employee asked to carry out any work at height is competent to do so. This will be refreshed at 3 yearly intervals.

Ladders & Stepladders

Staff must have had appropriate information, instruction and/or training before being allowed to use ladders and other access equipment.

The source document for all ladder operations is HSE document INDG 402 – Safe use of ladders and stepladders.

Only ladders conforming to BS2037 or EN131 should be used.

Under normal circumstances the maximum height to which staff may work is 3m, with a maximum standing height of 2m from the ground.

be found in the HSE document 'Safe use of ladders and stepladders - INDG455.

Alternative Methods of Access to Height

Mobile Elevated Work Platforms

Any work requiring the use of mobile elevated work platforms will be carried by suitably trained, certificated (IPAF) and competent staff.

Before any activity using a mobile elevated work platform any associated risk assessment and/or method statement must address the following safety aspects of its use:

- Selection of MEWP
- Use on the highway
- Pre-operating safety checks
- Raising the platform
- Safe operation
- Lowering the platform

Any staff using a boom type MEWP must use the following fall restraint system

- Wear a full body harness which complies with BS EN361
- Use a short lanyard with suitable connectors ideally the lanyard should be adjustable so that the user can shorten it as much as possible and still allow the work to be done. At no point should the user be able to leave the cage.
- Connect the lanyard between the main attachment point of the harness (front 'D-ring' attachment at waist level) and a suitable attachment point in the cage (typically a strong edge rail or defined anchor point) use suitable locking carabiners / connectors

Further information on the safe use of mobile elevated work platforms can be found in the following HSE document:

IPAF Operators' Safety Guide for Mobile Elevating Work Platforms.

Tree Climbing

For all tree work involving work at height, the Company will plan the work and select appropriate work equipment make it as safe as possible. Climbing work with a personal fall protection system - ropes and harness - will only be done if:

- A risk assessment has shown that the work can be done safely while using that system
- The use of other, safer work equipment (e.g. mobile elevating work platforms) is not justified
- Our staff and a sufficient number of available people have received training specific to the task, including rescue techniques.

The main climbing techniques in tree work are either:

- Work positioning, e.g. changeover climbing using a harness, friction knot and climbing line); or
- Rope access and positioning, e.g. footlocking or single rope technique (SRT).

In the tree, where possible, the system will be securely attached to two load-bearing anchor points. Each anchor point will be strong enough to support the climber, work equipment and any foreseeable loading.

Work positioning systems will only be used if there is a suitable backup system for preventing or arresting a fall. If the backup system includes a second line, the user must be connected to it. If it is not reasonably practicable to have a backup system, we will make sure that the work positioning system doesn't fail – for example by:

- Training
- Using properly chosen equipment
- Choosing reliable anchor points
- Following industry and HSE guidance
- · Correct use of tools.

Rope access and positioning will only be used if there are at least two separately anchored lines - one the working line and the other a safety line. The user must be connected to both lines using a suitable harness. The working line will be equipped with a safe means of ascent and descent and have a self-locking design to prevent the user falling if they lose control. The safety line will be equipped with a mobile fall protection system connected to, and travelling with, the user of the system.

In rope access and positioning a single rope can be used if a risk assessment has shown that the use of a second line would entail higher risk, and appropriate measures have been taken to ensure safety.

HSE recognises that it is not always reasonably practicable to have either two climbing lines or to be attached to the tree by two separate systems. In these circumstances the guidance provided in AFAG 401 Tree Climbing Operations should be used.

Fall protection equipment for tree climbing

All tree climbing equipment purchased by Elliott Environmental Surveyors will have evidence of conformity with the relevant BS EN standard, and carry a relevant CE mark. No structural alterations will be made to any item.

All items of fall-protection equipment will be used according to the manufacturer's instructions. Personal fall-protection systems will be put together by a competent person to ensure that each component and the system is appropriate for the service conditions and is correctly configured and compatible with neighbouring components.

Manufacturer's guidance will be followed when determining the typical lifespan of equipment. If the user is at any point unsure about a component, it should be removed from service and inspected by a competent person.

Fall protection equipment for tree work is covered in more detail in Appendix 6

Fall protection plan

A site specific fall protection plan will be prepared when required and made available to the relevant employees. It will contain the following information:

- An assessment all fall hazards in the work area.
- The fall protection applications employees will be working in, and the equipment needed to work safely.
- Correct procedures for assembly, maintenance, inspection, and disassembly of fall protection systems used.
- Correct procedures for handling, storage, and securing of tools and materials.
- Training methods for the employees working on the jobsite.
- The method for prompt, safe rescue of injured workers (i.e., rescue plan).

APPENDICES

Appendix 1 - HSE Guidance on Use of Computers

The following guidance from HSE suggests ways of minimising any discomfort caused by using a computer. Note that current guidance is available via the HSE Website.

Getting comfortable

- Adjust your chair and screen to find the most comfortable position for your work. Your forearms should be approximately horizontal and your eyes the same height as the top of the screen.
- Make sure you have enough space to take whatever documents or other equipment you need.
- Try different arrangements of keyboard, screen, mouse and documents to find the best arrangement for you.
- Arrange your desk and screen to avoid glare, or bright reflections on the screen. Adjust the blinds or use a screen filter if it helps.
- Make sure you there is space under your desk to move your legs freely by moving any boxes or equipment.
- Avoid excess pressure from the edge of your seat on the backs of your legs and knees.
 A footrest may be helpful.

Keying in

- Adjust your keyboard to get a good keying position. A space in front of the keyboard is sometimes helpful for resting the hands and wrists when not keying.
- Try to keep your wrists straight when keying. Keep a soft touch on the keys and don't overstretch your fingers.

Using a mouse

- Position the mouse within easy reach, so it can be used with the wrist straight. Sit
 upright and close to the desk, so you don't have to work with your mouse arm stretched.
 Move the keyboard out of the way if it not being used.
- Support your forearm on the desk, and don't grip the mouse too tightly.
- Rest your fingers lightly on the buttons and do not press them hard.

Reading the screen

- Adjust the brightness and contrast controls on the screen to suit lighting conditions in the room
- Make sure the screen surface is clean.
- In setting up software, choose options giving text that is large enough to read easily on your screen, when sitting in a normal, comfortable working position. Select colours that are easy on the eve.
- Individual characters on the screen should be sharply focused and should not flicker or move. If they do the screen may need servicing or adjustment.

Posture and breaks

- Don't sit in the same position for long periods. Make sure you change your posture as
 often as practicable. Some movement is desirable, but avoid repeated stretching to
 reach things you need.
- Most tasks provide opportunities to take a break from the screen to do other tasks.
 Make use of them. If there are no such natural breaks in your job you should take frequent short rest breaks which are better than fewer long ones.

Appendix 2 - Asbestos Awareness

Types of Asbestos

There are three main types of asbestos – chrysotile, amosite and crocidolite; they are usually called white, brown and blue asbestos respectively. However, they cannot be identified just by their colour.

Blue and brown asbestos (the two most dangerous forms) have not been imported into the UK for nearly 20 years and their use was banned in 1985. White asbestos was banned (except for a small number of specialised uses) in 1999.

Work with asbestos can release small fibres into the air. Breathing in these fibres can eventually lead to a number of fatal diseases. These include:

asbestosis or fibrosis (scarring) of the lungs;

lung cancer; and

mesothelioma - a cancer of the inner lining of the chest wall or abdominal cavity.

Asbestos-related diseases are currently responsible for up to 3500 deaths a year in Britain. There is usually a long delay between first exposure to asbestos and the first symptoms of disease. This can vary between 15 and 60 years. It is possible that repeated low-level exposures may lead to asbestos-related diseases, although high exposure for long periods is linked more clearly to these illnesses. But provided the asbestos material is intact and in a position where it cannot easily be damaged, it will not pose a risk to health by releasing fibres into the air. Many of those suffering today from asbestos-related diseases worked in the building trades. They were carpenters, joiners, shop fitters, plumbers, electricians, gas service engineers etc. They were exposed to asbestos fibres in their day-to-day work with asbestos containing materials or because work with asbestos was carried out near them.

Location of Asbestos

Asbestos is likely to be in a building if:

- it was built or refurbished between 1950 and 1980 and particularly.
- it also has a steel frame; and/or it has boilers with thermal insulation.

You also need to bear in mind that asbestos cement has also been widely used as a building material since the 1950s.

Where is asbestos found in buildings?

Many thousands of tonnes of asbestos were used in buildings in the past. Much of this is still in place and you cannot easily identify it from its appearance.

Its most common uses were:

- sprayed asbestos and asbestos loose packing generally used as fire breaks in ceiling voids
- moulded or preformed sprayed coatings and lagging generally used in thermal insulation of pipes and boilers
- sprayed asbestos mixed with hydrated asbestos cement generally used as fire protection in ducts, firebreaks, panels, partitions, soffit boards, ceiling panels and around structural steel work
- insulating boards used for fire protection, thermal insulation, wall partitions and ducts
- asbestos cement products, which can be compressed into flat or corrugated sheets
- · corrugated cement sheets, which are largely used as roofing and wall cladding
- other asbestos cement products include gutters, rainwater pipes and water tanks.

So what should you do?

Any asbestos-containing materials on site should have been identified before work starts. Those responsible for the building have a legal requirement to provide your supervisor/employer with information on the location and condition of these materials. There should be a current asbestos survey and asbestos management plan in place for premises you visit. Before you start work ask the building manager or your supervisor 'Has the site been checked for asbestos?'

If there is asbestos and if you are likely to come into contact with it, get advice from those in charge. If you are in any doubt about whether you are likely to encounter asbestos STOP WORK, and find out. If you come across any hidden or dusty materials which you suspect may contain asbestos, stop work and get advice. The person in charge of the job must find out if there is any asbestos on the site or assume that anything that looks like asbestos is asbestos. Identification of asbestos-containing materials is not easy and you can only be sure they are asbestos if they have been tested by a specialist laboratory.

What should those in charge of the job do?

They must:

- assess the risk to your health from any work that you do, and decide what precautions you need to take
- prevent your exposure to asbestos or reduce it to the lowest level possible by using suitable controls
- give you information, instruction and training so that you know the risks and the precautions you should take
- give you clean protective clothing to wear when you are in proximity to asbestos
- make sure you are properly trained to use a respirator (mask) if you need one, that
 you know how to fit it properly and that it's in good working order, is clean and is
 stored in a safe place
- consult the health and safety representative, if there is one, about the control measures to be taken.

Appendix 3 - Guidance on the Safe Use of Ladders

The following checklist specifies the main points to remember when using ladders:-Do not erect:-

- On sloping ground
- · On top of moveable objects
- In a high wind
- In front of a door which may be opened
- Against a slippery or unstable surface
- At a shallow angle, or use horizontally as a plank or bridge
- Leaning to one side
- At too steep an angle

Do not:-

- Use as a place of work unless the work is of short duration and only after a careful assessment of the risks involved deems a ladder adequate.
- Use tools or do jobs requiring two hands while standing on a ladder;
- Drop things from a ladder
- Straddle from the ladder to a nearby foothold
- Allow more than one person up a ladder at a time
- · Rest tools or implements against the base of a ladder
- Use a ladder which is too short
- Use a defective ladder
- Use a makeshift ladder or borrow a ladder not owned or hired to Elliott Environmental Surveyors
- Splice or lash ladders together
- · Leave tools or objects on rungs unless properly hooked on
- Over-reach (always keep hips within the stiles)
- · Overload a ladder or support it with a plank bearing on a rung
- Slide down a ladder
- Carry sheets of material, especially if it is windy
- Carry a ladder on a vehicle which is too short for it
- Work on a ladder near electrical conductors

Do:-

- · Place ladder on a firm level base
- Set at an angle near to 75°, remember 1 length out, 4 lengths up.
- Make an effort to tie the ladder in position, preferably at top and bottom
- Make sure the ladder projects well above the standing or climb off level
- Check support hooks are properly engaged
- Use a bracing board for windows and similar openings
- Use bag on a rope, or special belt to carry things so leaving hands free for climbing
- Secure all doors likely to foul a ladder
- · Use two hands in climbing a ladder
- · Use one hand to hold on while working on a ladder
- Have a mate on guard where appropriate to foot the ladder
- Make sure footwear is in good condition and soles are clean
- Make sure rungs are clean
- Carry a ladder with end high enough to clear people's heads, where possible
- Use only authorised equipment
- Use safety belt or harness for high work
- Keep children and unauthorised persons away from erected ladders
- Report all defects immediately
- · Check ladder register for past condition of ladder and inspect ladders before use
- Inspect a ladder immediately after any fall or overload
- · Consider using alternatives such as staging, tower platforms, etc
- Use correct ladder for the job
- Store ladders carefully

Appendix 4 - Method Statements

The Company's Environmental Surveying procedures set out guidance for the main areas of company activity. Specific method statements – also known as Safe Working Method Statements – should be prepared for all work activities assessed as having a significant safety risk. Particular attention should be given to those activities that have been assessed to be of high risk, e.g. working at heights, in confined spaces, working near traffic.

Purpose

The purpose of a Method Statements is to:

- outline a safe method of work for a specific activity
- provide an instruction document that staff must read and understand before starting an activity
- meet legal requirements i.e. hazard and risk assessment and control
- provide evidence for auditing and inspection.

Contents

The Method Statement will contain the following information:

- the address and name of the site
- · the identity of the site manager
- the name of any sub-contractors involved
- description of the plant and/or equipment involved
- the PPE required
- · the step by step work procedure
- details of any supporting documents
- · confirmation of understanding and acceptance.

Implementation

The supervisor shall:

- ensure that the Method Statement is written, approved and followed; and
- ensure that all staff involved in the activity have been instructed in the relevant Method Statement prior to commencing the activity.

Staff shall:

- be instructed in the relevant Method Statement
- sign a record that they have been instructed in the relevant Method Statement; and follow the procedures and controls in the Method Statement.

Records and Review

Method Statement records are **to be kept on site during the duration of the project** and then will be filed in the office upon completion. Records of induction into the Method Statement must be maintained in local training records on site.

A Method Statement shall be reviewed under the following conditions:

- where a known risk exists
- where near miss or medical treatment injury and/or damage have actually occurred. A
 specific risk assessment is to be conducted to determine the need for a Method
 Statement
- where an activity process or method is changed
- · where a new process is introduced
- on a 12 monthly basis from the last review
- if legislation surrounding the Method Statement changes

where the equipment used in the Method Statement changes.

Appendix 5 - Lone Working Arrangements

1 Lone Working Risk Assessment (L W RA)

(Master to be created. To be added as an extra element to site H & S RA when appropriate. Copy to be left in office and copy to be taken to site.)

Line to be added to standard H & S RA re Lone Working to indicate whether Lone Working Risk Assessment to be completed or not.

Lone Working Risk Assessment MUST be checked and countersigned by Chris Chase before leaving the office. If CC not available this may be done by Tim Elliott or Ruth Hopgood.

Particular sites and situations may have additional risks. LW RA to include assessment of ability of individual to work alone based on experience, level of training, newness to the situation, special risks of the job or to the particular individual etc.

The following risks must be assessed as part of the process (along with any other relevant risks to lone worker)

Specific risks to a lone worker in normal working situations

- Does the environment, location or the task place more of a risk on a solitary worker?
- Are there safe ways in and out of premises/sites for one person?
- Has the lone worker received sufficient information and training to enable the work to be done safely alone?
- Can machinery and equipment be adequately lifted, controlled and handled by one person?
- Can all chemicals, substances and materials be safely handled by one person?
- Are the welfare facilities adequate and accessible?
- Does the lone worker have first aid equipment or access to it?
- Is the lone worker more at risk because of their gender or inexperience?
- Is the worker medically fit to undertake the work alone? (Employees are asked to inform the company of any new medical conditions or illnesses that might affect their ability to carry out their normal day to day tasks without compromising the health and safety of themselves or others.)
- What supervision arrangements are in place?

Specific risks to a lone worker in emergency situations

- Does the lone worker have access to a suitable means of communication or other means of summoning help?
- Is there a risk of violence associated with the location or task?
- Are there contingency plans in place should an alert or alarm be raised by the lone worker? Are these plans well known and rehearsed?
- Has the worker received specific training in how to respond to foreseeable emergencies that may arise in the course of working alone?

Risk Assessment Outcomes

- Lone Working RA to be added to H&S R A . Copy to be left with nominated office colleague and one to go to site.
- Level of supervision, monitoring and back-up to be specified based on the findings of the RA.

- Contact arrangements to be specified (eg. With nominated office colleague and/or a buddy.)
- Lone Working Details form to be completed and left behind in with nominated office colleague and given to the nominated buddy when one has been arranged. (addendum to the Lone Working RA??)
- To specify any particular equipment/PPE to be used to protect in lone working situation. Short wave radio, mobile charger, additional First Aid Kit etc etc.

2 Lone Working Details Form

(To be left with nominated office colleague/buddy and a copy taken on site – as an additional sheet to RA? Could be pre-printed and kept on file with Section A completed for different individuals. Prepare sufficiently in advance if to be left with a home buddy)

Section A

Name

Mobile No.

Home phone number

Next of Kin/ Home contact in emergency

Personal Vehicle Details Registration No Make and Model Colour

Section B

Lone Working Plan

(To be updated if planned route or timings change and nominated office colleague/buddy kept informed)

Date of Lone Working:

Project No: Project Name:

Location of Site: (Grid references, for use in emergency?)

Purpose of visit:

Vehicle being used: (Personal vehicle, Citroen van, Suburu)

Route to site: (Main road numbers)

Expected arrival time at site: Expected parking area:

Time of any meeting and name of person being met:

Expected departure time from site: Expected office/home return time:

Agreed contact arrangements/phone-in times to office during working day Call office on arrival at site, every three hours and on departure from site. Name of nominated office colleague

Agreed contact arrangements/phone-in times outside working day

Agreed contact arrangements/phone-in times for return home

Emergency Plan

Agreed circumstances when Emergency Services will be contacted

Emergency services contact details local to site

Nominated Buddy (Buddy arrangement *must* be confirmed with the buddy)

Name:

Address:

Contact Phone Number: (Buddy MUST be available on this number at the required times.)

Name and contact details of person for buddy to call if Lone Worker does not call-in or return when expected.

3 Precautions to be taken by Lone Workers

(Guidance note to be printed on back of Lone Working RA and Lone Working Details form)

- Before leaving the office/home, make sure you have all the information you will need about the site you are visiting or the person you are meeting.
- Ensure that details of your meetings/site visits are available and easily accessible in the office, including the venue, grid references if necessary, person you are meeting, times, telephone numbers etc.
- If you are using your own vehicle it is your responsibility to ensure that the company has up to date information about it. (Make, model, colour, registration etc)
- Designate a 'buddy' and inform him/her of your intentions and provide contact numbers etc.
- Always carry ID
- Carry a mobile phone (ensuring the battery is fully charged) switched on except where this is hazardous.
- Take any necessary PPE and think ahead what could happen on the particular site being visited and in unexpected weather conditions.
- Carry a First Aid Kit with you.
- If meeting an unfamiliar person on site, ask for a telephone number and ring back to confirm the arrangement. If in any doubt do not go alone.
- Organise meetings and site visits in daylight hours and plan to be finished before 4.30/5.00.
- Park your vehicle where it cannot be blocked in/stuck and keep the vehicle locked.
- Do not enter or go near derelict or partially demolished buildings except in accordance with the appropriate risk assessment.
- If staff are out lone working all day they should call the office at 4.30/5.00 pm to confirm that they are going home. If they anticipate leaving site after this time they should contact the office anyway to give an update on where they are and their anticipated time of departure. Always keep the office up to date with estimated time of arrival back if it changes.
- If you are out after 4.30/5.00 pm use the Buddy System.
- Colleagues who deal with the public may face aggressive or violent behaviour. In any situation where you feel threatened or at risk you should get away immediately and call the police if you feel the need to. Any such incident should be reported to the company at the first opportunity.

4 Office System for Monitoring Lone Workers

- Each lone working occasion to be monitored by a nominated person who will be
 available in the office for the duration of that particular day. If the nominated person
 becomes unavailable during the day it will be their responsibility to pass the
 necessary information and paperwork to a colleague during their absence and
 retrieve them on return.
- Lone Worker to leave copy of Lone Working Risk Assessment and Lone Working Plan with the nominated person in the office before leaving for site.
- Nominated office person to set up reminders on MS Outlook at times when lone worker expected to call in and be available to accept call.
- Nominated person will record when the calls are received on the Lone Working Plan along with any variations to the plan.
- When lone worker has returned the Lone Working R A and Lone Working Plan will be filed in the relevant paper project file.

Appendix 6 - Fall Protection Systems for Tree Climbing

Work-positioning system

A work-positioning sit harness for tree climbing should have a pelvic attachment point and leg loop straps (to BS EN 813 and BS EN 358). Some models are also fitted with shoulder straps. It is designed to be used only in situations when the fall-protection system is under tension or any potential fall is limited to a short distance. When using work-positioning techniques, do not climb more than 250mm above your anchor point. Keep the climbing rope taut. Ensure any slack does not exceed 500mm.

Adjustable lanyards

Climbers need to carry an adjustable lanyard to provide, when appropriate, a secondary anchor to prevent the risk of pendulum swing. Lanyards are a key part of a tree-climbing system and have many uses, particularly as a supplementary loadbearing anchor point when working in the crown or when changing anchor points. Lanyards need to be adjustable to provide sufficient support to the climber. The side attachment points on a harness are designed for support (eg where the feet are on a branch or other part of the tree) but not suspension. Some harnesses provide forward attachment points suitable for suspension. It is important to consult the manufacturer's instructions for the harness. Do not attach the lanyard to one side alone.

Fall-arrest systems

A fall-arrest system comprises an anchor point, a full-body harness, and a method of connection between the anchor point and the harness that incorporates a deceleration device (energy absorber). Fall-arrest equipment is not commonly used in aerial tree work but may be appropriate, eg in unusual circumstances where climbers have to work above their anchor point. The extension of an energy absorber and the dangers of striking parts of the tree in a fall as well as the difficulties of achieving ergonomically acceptable work positions should be considered as part of the risk assessment.

Climbing ropes

Select ropes to provide a high margin of safety. Ropes suitable for tree climbing need to have a minimum diameter of 10mm and are not normally larger than 14mm. When selecting a rope, carefully consider the compatibility of any friction hitches or mechanical devices used.

Friction hitches

Ensure that rope or cord used for friction hitches is of a suitable type and has a minimum diameter of 8mm. Consider the fibre type and cord diameter, as this will have a significant impact on heat, abrasion resistance, knot-tying characteristics and working life. Climbers need to ensure that the friction cord selected is compatible with the climbing line. A diameter of 10mm is recommended for normal commercial use. Friction hitch materials are subject to high levels of wear. They should be inspected regularly, with wear rates compared to manufacturer's guidelines and replaced if significant wear is found. Inspect climbing hitches thoroughly before, after and, if necessary, during each use. Climbers need to be aware of the characteristics of each friction hitch they use and how they perform in combination with other components, eg a micro pulley. The climbing system used needs to brake reliably and support the climber.

Knots and splices

Climbers need to know the characteristics and scope of application of any knot used. Tie, dress and correctly set each knot and monitor carefully during use. Splices need to be made by someone competent to splice, eg the manufacturer. Competence should be demonstrable for each rope type.

Karabiners

Each karabiner used to connect the harness to a lifeline needs to have a springloaded self-locking gate that requires at least three distinct movements to open it. There is a wide range of connectors that function using this type of mechanism. It is vital that the most appropriate type is used for each specific application. Ensure karabiners are loaded correctly. It is essential that they are kept in correct alignment. Secure climbing line and friction cord to the karabiner so that it is unlikely to misalign or come into contact with the gate mechanism. Use an appropriate rope termination and/or a rope-holding accessory such as a plastic fast or rubber sleeve. Karabiners should not be 'chain linked' as this can easily lead to twisting and associated pressure on the gate.

Inspect karabiners carefully and maintain before and after use. Monitor karabiners during use. The gate mechanism is susceptible to dirt build-up that can affect its function. Clean the mechanism using soapy water followed by flushing with compressed air after drying. Lubrication may also be necessary (see manufacturer's recommendations). Check the mechanism function by opening the gate 10mm and applying light rotational pressure to the barrel to bias the mechanism towards the karabiner nose. Carefully rest the gate onto the karabiner nose and release. The gate should return automatically to the locking position. NB: The gate must function correctly and reliably before use.

Extract from AFAG 401 Tree Climbing Operations